DEPARTMENT OF PUBLIC HEALTH

COUNTY OF SAN BERNARDINO

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Guidelines for Validating a Sushi Rice HACCP Plan (Option B)

According to the California Retail Food Code (CAL CODE), Article 5. Section 114419 (3) a HACCP plan is required when food additives or components, such as vinegar, is used to render a food non Potentially Hazardous such as Sushi rice. The HACCP plan shall indicate all of the following pursuant to CAL CODE section 1144191.1:

- Ingredients, materials and equipment
- Formulation or recipes
- A trained, designated food employee
- Standard Operating Procedures that includes the following:
  - Critical Control Point (CCP)
  - Critical Limits
  - The method and frequency for monitoring the CCP
  - Corrective Action to be taken
  - The method and frequency for verifying a HACCP Plan
  - Record Keeping

The following must be included in the Sushi rice HACCP Plan:

- A recipe or formulation for the Sushi rice HACCP Plan which must include all of the following:
  - Type of rice, (for example “short grain”)
  - The concentration of the vinegar, (for example: 5 %)
- Methods of cooking rice, include the time and temperature.
- Methods of preparing mixture of vinegar, salt, and sugar.
- Method of cooling cooked rice, indicate time and temperature.
- Method of mixing rice and vinegar solution.
- Identify the Critical Control Points e.g. (adding vinegar).
- Identify your Critical Limits (target pH is < 4.4 and must not reach critical limits > 4.6).
- The pH of the Sushi rice must be initially validated by an Accredited Laboratory to indicate the final target pH is 4.4 or less, and does not exceed 4.6 (include laboratory result with submitted plan).
- Methods of measuring and the frequency of monitoring your CCP (for example: measuring the pH daily by using a pH meter or pH test strip paper accurate to 0.2 -0.3).

- Describe your Corrective action (for example: if the pH is not less than 4.4, the Sushi rice will be discarded or more vinegar will be added).
- Policy and procedures regarding storage of Sushi rice should indicate holding time and temperature (for example: 12 hours at 70º F -80º F).
- A sample of Sushi rice must be sent for pH testing to an accredited Laboratory when:
  - Changing recipe or ingredients (for example: changing the type of rice or vinegar)
  - Annually, after the initial submission of the HACCP Plan
- Describe policy regarding leftovers of the Sushi rice (for example: discard leftover Sushi rice after 12 hours).
- Describe policy regarding record keeping, for example: keeping a record of all Sushi rice HACCP plan related documents for at least 2 years.

Measuring The Acidity (pH) Of Sushi rice By Using a pH Test Strip Paper

Monitoring the acidity of your Sushi rice is an essential part of your approved HACCP plan. You may follow the instructions below to measure the pH of your Sushi rice daily:

- Use a pH test strip accurate to 0.2 to 0.3
- Measure the acidity (pH) of your Sushi rice within 30 minutes after acidification (mixing the cooked rice and vinegar solution)
- Make a rice slurry by mixing ¾ cup of distilled water and ¼ cup of Sushi rice in a clear plastic or metal cup
- Stir the slurry (mixture) for 20 seconds
- Tear off a strip of test paper
- Dip into the liquid portion of the rice slurry (for time period as directed by the manufacturer)
- Compare the color of test strip to color chart
- Record the pH in pH log
- Add more vinegar if the pH of Sushi rice is more than 4.4

List of Laboratories measuring the pH of Sushi rice in San Bernardino County:

- Ag Tech. (909) 464-2244
- Michaelson Laboratory: (562) 928-0553
- Public Health Laboratory: (909) 383-3000

Please be advised this list may not be inclusive and should not be considered an endorsement by this Division. Please contact the individual laboratories directly to obtain current information regarding their locations, fees, etc .

You may use the following Sushi Rice Flow Diagram as a guideline to develop and submit your Sushi Rice HACCP Plan to this Division. For additional information, please contact the following Environmental Health Specialist:

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Sushi Rice Flow Diagram

Receiving: Receiving Dry Ingredients (such as: Rice, Sugar, Salt, Vinegar, etc).

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Dry Storage: Storing dry ingredients in your dry storeroom

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Preparation: Assemble all ingredients and utensils. Weigh or measure all ingredients according to the recipe. Note: If rice is pre-soaked in water for more than 2 hours, soaking must take place under refrigeration (41 º F or below)

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Vinegar, Sugar and Salt Solution:
-Measure ingredients per recipe
-Prepare vinegar, sugar and salt solution per recipe
-Heat the mixture to dissolve sugar & salt (do not boil)

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Rice:
-Measure rice and water
-Cook rice in rice cooker (indicate time & temperature)
-Cool rice to 115º F in shallow pans in less than 2 hours (describe cooling procedure)

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Add vinegar solution to rice. Mix the mixture continuously with paddle (indicate time and temperature). Use a calibrated pH meter or a pH test strip paper accurate to 0.2-0.3. Measure the pH of Sushi rice daily. Record the pH in pH log.

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Target pH is less than 4.4

⇦ Yes

⇨ No

⇩

-Hold rice at room temperature
-Indicate time and temperature (for example: 12 hours at 70º F - 80º F)
-Discard rice after 12 hours

⇦

Take Corrective action:
- Add more vinegar solution, if made within 2 hours
-Measure the pH to ensure it is 4.4 or lower

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- Send sample of Sushi rice for pH testing to an accredited Laboratory when:
  - Changing recipe or ingredients (for example: changing the type of rice or vinegar)
  - Annually, after the initial submission of the HACCP Plan

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Record Keeping: Keep the following Sushi rice HACCP plan documents for two years:
pH log; Record of corrective action taken; Laboratory results, and record of the Sushi rice HACCP Training program for designated employee